



JFPS 2009

★ Joint Forces Pharmacy Seminar ★

Medication Storage and Security: The #1 Non-Compliant Medication Management Standard

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American Pharmacists Association
APHA

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15 LITTLE YEARS
OF BIG PHARMACY
SERVICE



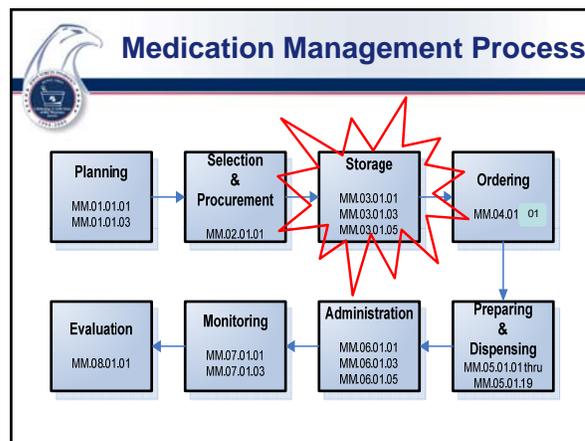
Learning Objectives

- Describe the importance of maintaining safe storage and security of medications
- Define medication storage and medication security
- Outline all the Joint Commission standards related to medication storage and medication security
- Describe strategies to implement best practices for maintaining proper storage of medications



Self-Assessment Questions

- True or False. Periodic inspection of medication storage is only required in the inpatient care areas.
- What are the most common non-compliant medication management standards?
 - a. Medication Order Review
 - b. Medication Storage
 - c. Medication Administration
 - d. Medication Dispensing
- True or False. The beyond-use-date for an opened multi-dose vials is 28 days.




Medication Storage & Security

- Importance
 - Medication storage is designed to:
 - assist in maintaining medication integrity
 - promote the availability of medications when needed
 - minimize the risk of medication diversion
 - reduce potential for dispensing errors
 - Law and Regulation and manufacturers' guidelines further define the hospital's approach to medication storage

The Joint Commission, Hospital Accreditation Standards, 2009



Medication Storage & Security

- Scenarios
 - Heparin 10,000 u/ml stored in ADC instead of 1,000 u/ml
 - If medications for 1st dose are in the ADC, pharmacy review may be by-passed (override)
 - Unsafe quantities of medications in the ADC – bulk bottle of liquid medication
 - Healthcare professionals with substance abuse issues find ways to divert medications from ADC
 - Expired medications in locked utility room



Medication Storage & Security

Army Top Non-Compliant Standards from 2006 to 2008

Standard	Name	Total # of MTFs with Findings	% of MTFs
IC.4.10	Once hospital has prioritized its goals, strategies must be implemented to achieve goals	16	46%
EC.5.20	Newly constructed and existing environments of care are designed and maintained to comply with LSC	14	40%
PC.4.10	Development of a plan for care, treatment, and services is individualized and appropriate to the patient's needs, strengths, limitations, and goals	14	40%
MM.2.20	Medications are properly and safely stored	11	31%
EC.1.10	Hospital manages safety risks	10	29%
MM.3.20	Medication orders are written clearly and transcribed accurately	8	23%
EC.5.40	Hospital maintains fire-safety equipment and building features	6	17%
HR.3.10	Staff competence to perform job responsibilities is assessed, demonstrated, and maintained	6	17%
NPSG 2B	Standardize a list of abbreviations, acronyms, symbols, and dose designations that are not to be used throughout hospital	6	17%
NPSG 2C	Measure and assess, and if appropriate, take action to improve timeliness of reporting and receipt of critical test, results and values	6	17%

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- ### Medication Storage & Security
- **Definitions**
 - Medication storage – defines medication location such as drug cabinet, automated dispensing cabinet, refrigerator, medication cart as well as proper methods for storing medications
 - Medication security – addresses keeping medications in a storage area such that unauthorized personnel are prevented from obtaining access to the medications

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- ### Medication Storage & Security
- **Revised Center for Medicare and Medicaid Services (CMS) Conditions of Participation**
 - Federal Register 11/27/06, effective 1/28/07
 - All drugs and biologicals be kept in a secure area, and locked when appropriate
 - Schedules II, III, IV, and V drugs must be kept locked within a secure area
 - Only authorized personnel may have access to locked areas

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- ### Medication Storage & Security
- **"Secure Area" as defined by CMS**
 - An area in which staff are actively providing patient care or preparing to receive patients
 - OR suite when staffed and actively providing care
 - OR suite when not operational—not secure
 - Areas restricted to authorized personnel only are secure
 - Organization determines which staff are authorized (e.g. janitors, maintenance staff)
 - Areas where patients and visitors are not allowed without the supervision or presence of a health care professional are secure

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- ### Medication Storage & Security
- **Issues:**
 - Carts/medications are found:
 - Not within observation of nurses
 - In corridors with public access
 - On counters
 - Locked areas not locked or keys not secure
 - **Best Practices:**
 - Non-mobile carts must be locked
 - Place mobile carts in a locked room
 - Medications at bedside only if self-administered
 - "Fanny-pack" scenarios

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- ### MM.03.01.01 Standard & Elements of Performance
- EP 2 - Store medications according to the manufacturers' recommendations or, in the absence of such recommendations, according to a pharmacist's instructions
 - EP 3 - Store controlled medications to prevent diversion
 - EP 4 - Addressing the control of medication between receipt by an individual health care provider and administration of the medication
 - EP 6 - Prevent unauthorized individuals from obtaining medications
 - EP 7 - Stored medications and the components used in their preparation are labeled with the contents, expiration date, and any applicable warnings
- The Joint Commission, Hospital Accreditation Standards, 2009



MM.03.01.01 Standard & Elements of Performance

- EP 8 - Removes all expired, damaged, and/or contaminated medications
- EP 9 - Keep concentrated electrolytes present in patient care areas only when patient safety necessitates their immediate use
- EP 10 - Medications available in the most ready-to-administer forms commercially available
- EP 18 - Periodically inspects all medication storage areas

The Joint Commission, Hospital Accreditation Standards, 2009



MM.03.01.01, EP 2 Medication Storage

- Store medications according to manufacturer's recommendations
- Best Practices:
 - Temperature Monitoring
 - Centralized Monitoring System
 - Wireless Monitoring System
 - Alarm Dialing Monitors





SensaPhone™ TempTrak™ ThermaViewer™



MM.03.01.01, EP 2 Medication Storage

- Continuous monitoring of temperature
 - Staff must understand their responsibilities:
 - Temperature monitoring
 - Resolving problems related to out-of-range temps
 - Staff training component
 - Watch out for those refrigerators in areas not staffed 7 days/week
 - Digital thermometers may be an answer



MM.03.01.01, EP 3 Medication Storage

- Prevent drug diversion
 - Scheduled drugs are locked
 - Usage record is maintained
 - Discrepancies are resolved
 - Define resolution process
 - Define process of wasting
 - Access to automated cabinet is current
 - Staff must log out of automated cabinets
 - Electronic reporting to identify potential diversion



MM.03.01.01, EP 4 & 5 Medication Storage

- Written policy addressing the storage of medications between receipt by an individual healthcare provider and administration of medication, including:
 - Safe storage
 - Safe handling
 - Security
 - Disposition
 - Return to storage



MM.03.01.01, EP 4 & 5 Medication Storage

- Excerpt of a Sample Policy
 - Any drug received from the pharmacy should be placed in an approved storage area as soon as possible, not to exceed 30 minutes from time of receipt. *(Handling, Storage)*
 - All drugs removed from a medication storage area must be removed just prior to administration and only for one patient at a time. *(Handling)*
 - Once removed, the drug must remain with the individual at all times and should not be left unattended. *(Security)*
 - The drug should not be left on or in any area exceeding 80 degrees, including in pockets. *(Storage)*
 - If not administered or used, the drug should be returned to the original storage area within 30 min. *(Disposition)*

MM.03.01.01, EP 6 Medication Storage

- Prevent unauthorized individuals from obtaining medications in accordance with hospital's policy, law or regulation
- Non-licensed personnel
 - Risk Assessment
- Access to automated dispensing cabinet

MM.03.01.01, EP 7 Medication Storage

- Multi-Dose Vials (MDV)
 - USP Chapter 797 - 28 days "beyond use date"
 - Date MDV with expiration date
 - Best Practices:
 - Minimize use of MDV
 - Document: date opened and expiration date (28 days from day MDV is penetrated)
 - Pre-printed labels available



MM.03.01.01, EP 7 Medication Storage

MULTIDOSE INJECTABLE VIALS (MDV)

MULTI-DOSE VIALS (MDV) (lidocaine, insulins, injectables with preservative etc.)
 Expiration: 28 days from initial use or sooner if specified by manufacturer; also called Beyond-Use-Date; *must be labeled*

Label:

Date Opened: 21 Mar 08
 28 Day EXP: 18 Apr 08



ALL OTHER MULTI-DOSE CONTAINERS (MDC)

MULTI-DOSE CONTAINERS (MDC)
 (eye drops, Tylenol, Motrin, etc)
 Expiration: Manufacture's Expiration date or discard sooner if the product has been contaminated.



Brooke Army Medical Center, Department of Pharmacy, Fort Sam Houston, Texas

MM.03.01.01, EP 7 Medication Storage

- Beyond Use Date
 - Contrast media and warmers
 - Solution bags/bottles and warmers
 - Glucometer strips

MM.03.01.01, EP 8 Medication Storage

- Remove expired, damaged and/or contaminated medications
 - Procedures for handling expired medications
 - Ward/clinic inspections
 - Crash cart management
 - Storage of expired medications

MM.03.01.01, EP 9 Medication Storage

- Concentrated Electrolytes
 - Best Practices:
 - Remove from patient care units
 - If required for emergencies (OR, ER, etc.):
 - P&T Committee approval
 - Segregate and/or Lock up
 - Label ("**MUST BE DILUTED**" or "**HIGH RISK MEDICATION**")
 - Develop standard doses and unit of measure
 - Pre-printed forms or electronic order sets
 - High-alert medication procedures



Health Care Logistics, Inc



**MM.03.01.01, EP 10
Medication Storage**

- Most ready-to administer forms available from manufactures
 - Contrast media, heparin, saline flush, others
 - Insulin pens
- Unit-doses repackaged by the pharmacy or a licensed packaging company



**MM.03.01.01, EP 18
Medication Storage**

- Periodic inspection of storage areas
 - Inpatient and outpatient areas
 - Appropriately train staff
 - Unannounced inspection
 - Communicate findings with leadership



**MM.03.01.03
Emergency Medications**

- Issue
 - Emergency medications selection
 - Process in place to replace emergency medications & supplies when needed
- Best Practices:
 - Maximize use of unit-dose, age-specific, ready-to-administer
 - Pediatric dosing guidelines
 - Broselow™ Pediatric Emergency Tape
 - Emergency medications are secure



**MM 03.01.03
Managing Emergency**

- Adult strength medications in a pediatric crash cart
- Pediatric-specific Concentrations
 - Naloxone 0.02 mg/mL injection (Neonates)
 - Epinephrine 1:10,000 injection
 - Sodium bicarbonate 4.2% injection
 - Dextrose 25% injection



**MM.03.01.05
Medications Brought In**

- Defines when medications brought in by patient or LIP can be administered
- Prior to use, identification and visual evaluation of integrity
- Inform prescriber/patient if medications brought in are not permitted



**Answers To
Self-Assessment Questions**

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Closing Remarks

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